HUAWEI

SMART ENERGY CONTROLLER

Model: SUN2000-2/3/3.68/4/4.6/5/6KTL-L1



Active Safety
Active arcing protection

Higher Yields
Up to 30% more energy with optimizer

Battery Ready
Plug & play, whole-home power backup

Version No.: 01-202509

SUN2000-2/3/3.68/4/4.6/5/6KTL-L1

Technical Specification

Technical Specification	SUN2000 -2KTL-L1	SUN2000 -3KTL-L1	SUN2000 -3.68KTL-L1	SUN2000 -4KTL-L1	SUN2000 -4.6KTL-L1	SUN2000 -5KTL-L1	SUN2000 -6KTL-L1
Efficiency							
Max. efficiency	98.2%	98.3%	98.4%	98.4%	98.4%	98.4%	98.4%
European weighted efficiency	96.7%	97.3%	97.3%	97.5%	97.7%	97.8%	97.8%
Input (PV)							
Recommended max. PV power [1]	3,000 Wp	4,500 Wp	5,520 Wp	6,000 Wp	6,900 Wp	7,500 Wp	9,000 Wp
Max. input voltage	600 V						
Startup voltage	100 V						
MPPT operating voltage range	90–560 V						
Rated input voltage	360 V						
Max. input current per MPPT	12.5 A						
Max. short-circuit current	18 A						
Number of MPP trackers	2						
Max. inputs per MPP tracker	1						
Input (DC Battery)							
Compatible battery	LUNA2000-5/10/15-S0, LUNA2000-5/7/10/12/14/15/17/19/21-S1						
Operating voltage range	350–560 V DC						
Max. operating current	15 A						
Max. charge power	5,000 W						
Max. discharge power	2,200 W	3,300 W	3,680 W	4,400 W	4,600 W	5,000 W	5,000 W
Output (On Grid)							
Grid connection	Single-phase						
Rated output power	2,000 W	3,000 W	3,680 W	4,000 W	4,600 W	5,000 W	6,000 W
Max. apparent power	2,200 VA	3,300 W	3,680 W	4,400 VA	5,000 VA	5,500 W	6,000 VA
Rated output voltage	220 V AC/230 V AC/240 V AC						
Rated AC grid frequency	50 Hz/60 Hz						
Max. output current	10 A	15 A	16 A	20 A	23 A	25 A	27.3 A
Adjustable power factor	0.8 leading ... 0.8 lagging						
Max. total harmonic distortion	≤ 3%						
Power output	Yes (via SmartGuard-63A-S0)						
Protection Feature							
Anti-islanding protection	Yes						
DC reverse polarity protection	Yes						
Insulation monitoring	Yes						
DC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11						
AC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11						
Residual current monitoring	Yes						
AC overcurrent protection	Yes						
AC short-circuit protection	Yes						
AC overvoltage protection	Yes						
Over-heat protection	Yes						
Arc fault protection	Yes						
Battery charging from grid	Yes						
General Specification							
Operating temperature range	–25°C to +60°C (Derated above 45°C @ Rated output power)						
Relative operating humidity	0%–100% RH						
Operating altitude	0–4,000 m (Derated above 2,000 m)						
Cooling	Natural convection						
Display	LED indicators; integrated WLAN + FusionSolar app						
Communication	RS485, WLAN via inverter built-in WLAN module, Ethernet via Smart Dongle-WLAN-FE (Optional); 4G/3G/2G via Smart Dongle-4G (Optional); SA4H-A02						
Weight (incl. mounting brackets)	12.0 kg (26.5 lb)						
Dimensions (incl. mounting brackets)	365 mm x 375 mm x 156 mm						
IP rating	IP65						
Nighttime power	< 2.5 W						
Optimizer Compatibility							
DC MBUS compatible optimizer	SUN2000-450W-P2, SUN2000-600W-P						
Standards Compliance (More Available Upon Request)							
Safety	EN/IEC 62109-1, EN/IEC 62109-2						
Grid connection standards	G98, G99, EN 50549-1, CEI 0-21, VDE-AR-N-4105, AS 4777.2, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, IEC61727, IEC62116						

*1 The inverter max input PV power is 10,000 Wp when long strings are designed and fully connected with optimizers.

Disclaimer: The preceding values are measured by an internal laboratory of Huawei in a specific environment. The actual values may vary with products, software versions, usage conditions, and environmental factors.

Version No.: 01-202509